

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Coates et al.  
Serial No. : 07/835964  
Filed : February 20, 1992  
For : 1,3-OXATHIOLANE NUCLEOSIDE ANALOGUES



New York, New York  
September 17, 1992

Hon. Commissioner of Patents  
and Trademarks  
Washington, D.C. 20231

STATEMENT UNDER 37 C.F.R. § 1.56 AND § 1.97

Sir:

Pursuant to 37 C.F.R. §§ 1.56 and 1.97,  
applicants, through their attorney, make of record the  
following documents\* in the above-identified application:

United States Patent Publications

4,336,381

5,039,667

\*\*5,047,407

European Patent Publications

EP 0 212 409 B1

EP 0 302 760

EP 0 337 713 A2

EP 0 349 242 A2

EP 0 363 582 A1

\*\*EP 0 382 526 A2

\* Copies are enclosed. For the convenience of the Patent Examiner, applicants have enclosed a completed Form PTO-1449 listing these documents.

\*\* Applicants believe these documents may be relatively more pertinent than others of the documents cited herein.

Great Britain Patent Publications

GB 2 063 257 A

GB 2 230 266 A

International Patent Publications

WO 89/04662

\*\*WO 90/12023

WO 91/00282

\*\*WO 91/01326

\*\*WO 91/11186

Articles

\*\*Baba et al., "Both 2',3'-Dideoxythymidine and its 2',3'-Unsaturated Derivative (2',3'-Dideoxythymidinene) are Potent and Selective Inhibitors of Human Immunodeficiency Virus Replication in vitro", Biochemical and Biophysical Research Communications, 142(1) pp. 128-134 (1987) ("Baba");

\*\*Balzarini et al., "Potent and Selective Anti-HTLV-III/LAV Activity of 2',3'-Dideoxycytidinene, the 2',3'-Unsaturated Derivative of 2',3'-Dideoxycytidine", Biochemical and Biophysical Research Communications, 140(2), pp. 735-742 (1986) ("Balzarini");

\*\*Belleau et al., "Design And Activity Of A Novel Class Of Nucleoside Analogs Effective Against HIV-1", Fifth International Conference on AIDS, Montreal, Canada, Abstract T.C.O. 1 (1989) ("Belleau");

Carlisle et al., "Cellular Pharmacology Of The Anti-HIV Agent BCH-189 (2'-Deoxy-3'-Thiacytidine) In Human Peripheral Blood Mononuclear Cells (PBMC)", American Association for Cancer Research Proceedings, 31, abstract 2435, (1990) ("Carlisle");

Gosselin et al., "Systematic Synthesis And Biological Evaluation Of  $\alpha$ - and  $\beta$ -D-Lyxofuranosyl Nucleosides Of The Five naturally Occurring Nucleic Acid Bases", J. Med. Chem., 30, pp. 982-991 (1987) ("Gosselin");

Herdewijn et al., "3'-Substituted 2',3'-Dideoxynucleoside Analogues as Potential Anti-HIV (HTLV-III/LAV) Agents", J. Med. Chem., 30, pp. 1270-1278 (1987) ("Herdewijn");

Lin et al., "Synthesis and Antiviral Activity of Various 3'-Azido, 3'-Amino, 2',3'-Unsaturated, and 2',3'-

Dideoxy Analogues of Pyrimidine Deoxyribonucleosides against Retroviruses", J. Med. Chem., 30, pp. 440-444 (1987) ("Lin");

\*\*Mitsuya et al., "3'-Azido-3'-Deoxythymidine (BW A509U): An Antiviral Agent that Inhibits the Infectivity and Cytopathic Effect of Human T-Lymphotropic Virus Type III/Lymphadenopathy-Associated Virus in vitro", Proc. Natl. Acad. Sci. USA, 82, pp. 7096-7100 (1986) ("Mitsuya-1");

Mitsuya et al., "Inhibition of the in vitro Infectivity and Cytopathic Effect of Human T-Lymphotropic Virus Type III/Lymphadenopathy-Associated Virus (HTLV-III/LAV) by 2',3'-Dideoxynucleosides", Proc. Natl. Acad. Sci. USA, 83, pp. 1911-1915 (1986) ("Mitsuya-2");

\*\*Wainberg et al., "Anti-HIV Activity, Toxicity And Pharmacokinetics Of Totally Novel Nucleoside Analogs," Fifth International Conference on AIDS, Montreal, Canada, Abstract M.C.P. 63, p. 552, (1989) ("Wainberg-1").

\*\*Wainberg et al., "Characterization Of AZT-Resistant Isolates Of HIV-1: Susceptibility To Deoxythiacytidine And Other Nucleosides", Sixth International Conference on AIDS, San Francisco, California, Volume 3, Abstract S.B.87, p. 117 (1990) ("Wainberg-2");

None of the above-cited documents, made of record by applicants herein, renders unpatentable, either alone or in any combination thereof, the amended claims of this application. Applicant requests that these documents: (1) be fully considered by the Examiner during examination of this application, (2) be listed on any Notice of References Cited issued in this application, and (3) be printed on any patent that may issue from this application.

I Hereby certify that this correspondence is being deposited with the U. S. Postal Service as First Class Mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231, on

Sept. 21, 1992  
Carol L. Scott  
Name of Person Signing

Carol L. Scott  
Signature of Person Signing

Respectfully submitted,

Leslie A. McDonell  
James F. Haley, Jr. (Reg. No. 27,794)  
Leslie A. McDonell (Reg. No. 34,872)  
Attorneys for Applicants  
c/o FISH & NEAVE  
875 Third Avenue  
New York, New York 10022  
(212) 715-0600



Attorney Docket No. IAF/14

Applicant(s) : COATES ET AL.  
Title : 1,3-OXATHIOLANE NUCLEOSIDE ANALOGUES  
Filed Date : FEBRUARY 20, 1992  
Serial No. : 07/835,964

"EXPRESS MAIL" mailing label number EF477297931US

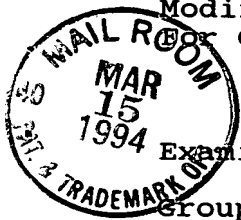
Date of Deposit MARCH 15, 1994

I hereby certify that this paper/fee is being deposited with the United States Postal Service "EXPRESS MAIL POST OFFICE TO ADDRESSEE" service under 37 C.F.R. 1.10 on the date indicated above and is addressed to the Hon. Commissioner of Patents and Trademarks, Washington, D.C. 20231.

  
ANTONIO MELENDEZ

PETITION FOR EXTENSION OF TIME & CHECK  
\$840.00 & RESPONSE & AMENDMENT FILED

#14



Modified PTO 1082  
 For Other Than A Small Entity

Attorney Docket No. IAF-14

Examiner : John M. Ford  
 Group Art Unit : 1202  
 Applicant(s) : Coates et al.  
 Serial No. : 07/835,964  
 Filed : February 20, 1992  
 For : 1,3-OXATHIOLANE NUCLEOSIDE ANALOGUES

SEARCHED MAR 19 1994

Hon. Commissioner of Patents  
 and Trademarks  
 Washington, D.C. 20231

New York, New York  
 March 15, 1994

TRANSMITTAL LETTER

Sir:

Transmitted herewith: [ ] a Preliminary Amendment;  
 [X] a Response to Examiner's Action; [ ] a Supplemental  
 Amendment; [ ] a substitute Specification; [X] a Declaration  
 Under 37 C.F.R. § 1.132; [ ] a Supplemental Declaration; [ ] a  
 Power of Attorney; [ ] an Associate Power of Attorney; [ ] formal  
 drawings; to be filed in the above-identified patent application.

FEE FOR ADDITIONAL CLAIMS

[X] A fee for additional claims is not required.

[ ] A fee for additional claims is required. The additional fee  
 has been calculated as shown below:

CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE	ADDITIONAL FEES
TOTAL CLAIMS	- * =	x	\$22	= \$
INDEPENDENT CLAIMS	- ** =	x	\$74	= \$
FIRST PRESENTATION OF A MULTIPLE DEPENDENT CLAIM		+	\$230	= \$
* If less than 20, insert 20. ** If less than 3, insert 3.				TOTAL \$ _____

- [ ] A check in the amount of \$\_\_\_\_\_ in payment of the fee for additional claims is transmitted herewith.
- [X] The Commissioner is hereby authorized to charge payment of any additional fees required under 37 C.F.R. § 1.16 in connection with the paper(s) transmitted herewith, or credit any overpayment of same, to Deposit Account No. 06-1075. A duplicate copy of this transmittal letter is transmitted herewith.
- [ ] Please charge \$\_\_\_\_\_ to Deposit Account No. 06-1075 in payment of the filing fee. A duplicate copy of this transmittal letter is transmitted herewith.

EXTENSION FEE

- [X] The following extension is applicable to the Response filed herewith; [ ] \$110.00 extension fee for response within first month pursuant to 37 C.F.R. § 1.17(a); [ ] \$360.00 extension fee for response within second month pursuant to 37 C.F.R. § 1.17(b); [X] \$840.00 extension fee for response within third month pursuant to 37 C.F.R. § 1.17(c); [ ] \$1,320.00 extension fee for response within fourth month pursuant to 37 C.F.R. § 1.17(d).
- [X] A check in the amount of [ ] \$110.00; [ ] \$360.00; [X] \$840.00; [ ] \$1,320.00; in payment of the extension fee is transmitted herewith.
- [X] The Commissioner is hereby authorized to charge payment of any additional fees required under 37 C.F.R. § 1.17 in connection with the paper(s) transmitted herewith, or to credit any overpayment of same, to Deposit Account No. 06-1075. A duplicate copy of this transmittal letter is transmitted herewith.
- [ ] Please charge the [ ] \$110.00; [ ] \$ 360.00; [ ] \$840.00; [ ] \$1,320.00; extension fee to Deposit Account No. 06-1075. A duplicate copy of this transmittal letter is transmitted herewith.



James F. Haley, Jr. (Reg. No. 27,794)  
Leslie A. McDonnell (Reg. No. 34,872)  
Attorneys for Applicants  
c/o FISH & NEAVE  
1251 Avenue of the Americas  
New York, New York 10020  
Tel.: (212) 596-9000